

The Rejection of Claims Under 35 U.S.C. § 112

The last O.A. rejected claims 15-23 under 35 U.S.C. § 112 on the grounds that these claims were indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, as to claim 15 step b, the last O.A. rejected the expression "injection molding ceramic mold insert" as vague, asserting there was no positive step to show how the insert was being injected.

Accordingly, applicants have rewritten their claims by matching their wording with that employed by Amaya et al (U.S. 5,976,457), save where the substance of applicants' invention requires to specifically distinguish over the latter and submit that the specification now complies with § 112.

The Rejection of Claims Under 35 U.S.C. § 102

The last O.A. rejected independent claim 15 and dependent claims 18-23 as being anticipated by Amaya et al (U.S. 5,976,457).

However, Amaya et al (U.S. 5,976,457) could not possibly have anticipated independent claim 15 and dependent claims 18-23 as these claims are based on the applicants' novel use of ceramic materials to fabricate their ceramic injection molded mold and mold components, an approach which Amaya et al (U.S. 5,976,457) have wittingly and unambiguously excluded from their invention.

The exclusion of ceramic materials from Amaya et al (U.S. 5,976,457), surprising as it may seem, is not an oversight but indeed intentional, given that:

1. Amaya et al (U.S. 5,976,457) recognize and emphasize the importance and benefits of tool longevity, equating this criterion with superior wear resistance.
2. Amaya et al (U.S. 5,976,457) cannot have been ignorant of the superior wear resistance of ceramic materials over tool steels.
3. Amaya et al (U.S. 5,976,457) could also not have been ignorant of the fact that molds having ceramic inserts were known to the prior art (e.g. Pluim, U.S. 4,704,079).
4. Amaya et al (U.S. 5,976,457) are persons skilled in the art of metal injection molding and, if not skilled in, are at the least aware of the art of ceramic injection molding.
5. Amaya et al (U.S. 5,976,457) could, therefore not have been ignorant of the advantages offered by the use of ceramic injection molded molds and mold components in terms of superior wear resistance and absence of secondary machining operations as compared with mold and mold components produced by metal injection molding of tool steel materials.

Yet, despite all the above facts, there is not to be found anywhere in Amaya et al (U.S. 5,976,457) the slightest allusion or mention suggesting or portending the use of ceramic materials for the fabrication of molds and mold components.

Skill in ceramic injection molding is not intrinsically concomitant with skill in metal injection molding, the former requiring more specialized skills owing to the radically different properties, powder morphology and processibility of ceramic materials used in ceramic injection molding.

In view of above facts, it must be concluded that the idea of producing molds and mold components from ceramic materials using the ceramic injection molding process, was

dismissed by Amaya et al as unfeasible and could, therefore, not have been anticipated, since anticipation implies *a priori* a conviction of latent feasibility. Indeed, one cannot anticipate something one has already eliminated as being unfeasible.

Hence, the instant invention's use of the ceramic injection molding process to fabricate molds and mold components, rather than by making use of the more costly and secondary operations-fraught metal injection molding process of the prior art, constitutes a novel and more efficient way to produce such articles.

The Rejection of Claims Under 35 U.S.C. § 103

The last O.A. rejected independent claims 16 and 17 under 35 U.S.C. 103(a) as being unpatentable over Amaya et al (U.S. 5,976,457) in view of Ruhle (U.S. 5,199,482) and over Amaya et al (U.S. 5,976,457) in view of Williamson et al (U.S. 5,435,959) respectively.

Claims 16 and 17 are now abandoned.

Conclusion

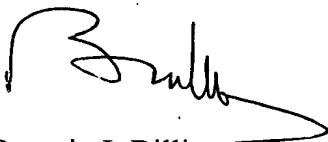
For all of the above reasons, applicants submit that the specification and claims are now in proper form and that the claims all define patentably over the prior art. Therefore they submit that this application is now in condition for allowance, which action they respectfully solicit.

Conditional Request For Constructive Assistance

Applicants have amended the claims of this application so that they are proper, definite and define novel subject matter which is also unobvious. If, for any reason this

application is not believed to be in full condition for allowance, applicants respectfully request the constructive assistance of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



Romain L. Billiet



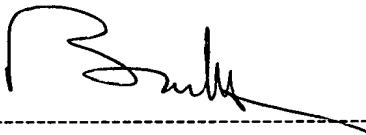
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November 14, 2002


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